

Claims

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1. An annulus stent, for repair of an intervertebral disc annulus, comprising an elongated centralized vertical extension, said centralized vertical extension comprising a left and a right lateral extension along said centralized vertical extension's horizontal axis.
2. The annulus stent according to claim 1, wherein said left and right lateral extensions comprise an inside edge, an outside edge, an upper surface and a lower surface, wherein said inside edge joins said centralized vertical extension to form a horizontal plane.
3. The annulus stent according to claim 2, wherein said upper surface forms an angle of about 0 to 60 degrees below said horizontal plane.
4. The annulus stent according to claim 2, wherein the length of said inside edge is less than the length of said outside edge.
5. The annulus stent according to claim 2, wherein said inside edge has a greater thickness than said outside edge.
6. The annulus stent according to claim 2, wherein said upper surface is barbed.

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7. The annulus stent according to claim 2, further comprising a recess wherein said upper surface joins said centralized vertical extension.
  8. The annulus stent according to claim 2, further comprising a flexible bladder affixed to said lower surface of said left and right lateral extensions.
  9. The annulus stent according to claim 8, wherein said flexible bladder comprises a membrane enclosing an internal cavity.
  10. The annulus stent according to claim 8, wherein said internal cavity is empty.
  11. The annulus stent according to claim 8, wherein said membrane comprises a thin flexible biocompatible material.
  12. The annulus stent according to claim 8, wherein said membrane further comprises a semi-permeable material.
  13. The annulus stent according to claim 8, wherein said internal cavity contains a biocompatible fluid.

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14. The annulus stent according to claim 13, wherein said biocompatible fluid is a hydrogel.

15. The annulus stent according to claim 9, wherein said membrane further comprises an impermeable material.

16. The annulus stent according to claim 9, wherein said internal cavity contains a biocompatible fluid.

17. The annulus stent according to claim 1, wherein said centralized vertical extension is of a shape selected from the group consisting of a trapezoid, circular and curved.

18. The annulus stent according to claim 1, wherein said annulus stent is made from a material selected from the group consisting of a biocompatible material, a bioactive material, and a bioresorbable material.

19. The annulus stent according to claim 18, wherein said annulus stent comprises a biocompatible fiber mesh.

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20. The annulus stent according to claim 1, wherein said annulus stent comprises a material selected from the group consisting of: expandable polytetrafluoroethylene (ePTFE); a material to facilitate regeneration of disc tissue; and a hygroscopic material.

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